

## **ABSTRACT**

A method and system for in-service reallocation of bandwidth (i.e. STS-1's) in a synchronous optical network (SONET) i.e. without interruption of the transport of data frames transmitted from a transmit node and received at a receive node, the transmit node comprising a mapper/aggregator, a first bandwidth configuration memory associated with the mapper/aggregator and a transmit framer and the receive node comprising a demapper/deaggregator, a second bandwidth configuration memory associated with the demapper/deaggregator and a receive framer. First and second memory banks are provided to the first and second bandwidth configuration memory, whereby the first memory bank of the first bandwidth configuration memory comprises current bandwidth allocation mapping information used by the mapper/aggregator and the first memory bank of the second bandwidth configuration memory comprises current bandwidth allocation mapping information used by the demapper/deaggregator. Updated bandwidth allocation mapping information is provided to the second memory banks. A bandwidth reconfiguration update request is generated and a reconfiguration flag is generated at the transmit node in response to the update request. The reconfiguration flag is transmitted from the transmit node to the receive node and the reconfiguration flag is detected at the receive node. The updated bandwidth allocation mapping information of the first bandwidth configuration memory's second memory bank is selected for use by the mapper/aggregator in response to the generation of the reconfiguration flag and the updated bandwidth allocation mapping information of the second bandwidth configuration memory's second memory bank is selected for use by the demapper/deaggregator in response to the detection of the reconfiguration flag.